

SpineGuard obtains European patent on automatic bone breach detection by DSG, applicable to orthopedic power drills and robots

PARIS and BOULDER (CO), September 22, 2025 – 8:30 am CEST - **SpineGuard** (FR0011464452 - ALSGD), an innovative company that deploys its DSG® (Dynamic Surgical Guidance) local conductivity sensing technology to secure and streamline the placement of bone implants, today announced that its patent application directed to protect algorithms for automatic detection of breaches during bone drilling, enhance safety of bone drilling power tools thanks to a DSG-enabled active safety stop, has received an intention to grant from European Patent Office.

Stéphane Bette, Deputy CEO and cofounder of SpineGuard, stated: *“On the heels of our US allowed patent last July, this European validation for a technically complementary patent is timely to support ongoing strategic discussions with the industry, in particular regarding applications to power drilling tools and robots.”*

Since its inception, SpineGuard has developed and maintained a significant IP portfolio currently including 11 patent families totaling 72 patents and applications as well as 3 trademarks, in the major geographies such as Europe, USA, China and Japan. The new patent object of this communication and about to be granted, is the first obtained by SpineGuard in Europe belonging to the category of DSG technology exploitation in smart surgical tools. Codesigned and validated with the ISIR (Institute for Intelligent Systems and Robotics) of Sorbonne University, CNRS and INSERM, this patent describes algorithms analyzing the DSG measurements to determine objectively and in real-time a pending breach during a bone drilling. SpineGuard had previously communicated in March 2023 on the experimental results obtained from utilization of such algorithms, where 100% of the blindly executed drillings could be stopped within a corridor considered as clinically safe, i.e.: 2 millimeters on each side of the interface between bone and the spinal canal with a mean distance of 0.7 millimeters.

About SpineGuard®

Founded in 2009 in France and the USA by Pierre Jérôme and Stéphane Bette, SpineGuard is an innovative company deploying its proprietary radiation-free real time sensing technology DSG® (Dynamic Surgical Guidance) to secure and streamline the placement of implants in the skeleton. SpineGuard designs, develops and markets medical devices embedding its technology. Over 100,000 surgical procedures have been secured worldwide thanks to DSG® and 39 studies published in peer-reviewed scientific journals have demonstrated the multiple benefits DSG® offers to patients, surgeons, surgical staff and hospitals. Building on these strong fundamentals and several strategic partnerships, SpineGuard is expanding the scope of its DSG® technology to the treatment of scoliosis via anterior approach, sacroiliac joint fusion, dental implantology and innovations such as the « smart » pedicle screw and power drill or surgical robotics. DSG® was co-invented by Maurice Bourlion, Ph.D., Ciaran Bolger, M.D., Ph.D., and Alain Vanquaethem, Biomedical Engineer. SpineGuard has engaged in multiple ESG initiatives. For further information, visit www.spineguard.com

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